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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/011,217	11/15/2001	Michael A. Epstein	US 010527	3623
24737	7590	06/02/2005	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS			WANG, TED M	
P.O. BOX 3001			ART UNIT	
BRIARCLIFF MANOR, NY 10510			PAPER NUMBER	

2634

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/011,217

Applicant(s)

EPSTEIN, MICHAEL A.

Examiner

Ted M. Wang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17 and 18 is/are allowed.
- 6) ☐ Claim(s) 1-6 and 9-14 is/are rejected.
- 7) ☒ Claim(s) 7, 8, 15 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>27 May 2003</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities:
  - On page 5, line 15, change "100" to --- 200 ---, and line 16, change "200" to --- 100 ---.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 10-13 are rejected under 35 U.S.C. 112, first paragraph as being **a single means claim**, i.e., where a means (a carrier signal) does not appear in combination with another recited element of means with under breadth. The single means claim which covered every conceivable means for achieving the stated purpose was held nonenableing for the scope of the claim because the specification disclosed at most only those known to the inventor. See MPEP §2164.08(a).
4. Regarding claim 9, the limitation of "a relatively low frequency relative to a carrier frequency of a transmitted signal" as recited, has not been taught in the specification. The specification only teaches "relatively low-frequency RF transmissions, or high-

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frequency sonic transmissions, would be particularly well suited for large area environments, such as arenas and amusement parks" as recited.

5. Regarding claim 13, the limitation of "the unpredictable sequence of bits occur at a low frequency relative to the carrier signal" as recited, has not been taught in the specification. The specification only teaches "relatively low-frequency RF transmissions, or high-frequency sonic transmissions, would be particularly well suited for large area environments, such as arenas and amusement parks" as recited.

***Claim Rejections - 35 USC § 101***

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

- Claims 10-13 are rejected under 35 U.S.C. 101 because the claimed invention subject matter is neither a processes, machines, manufactures, nor a compositions of matter.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Blasbalg (US 4,231,113).

- With regard claim 1, Blasbalg discloses a transmission system comprising:
  - a random bit generator (Fig.1 element 12 and) that is configured to provide an unpredictable sequence of bits (column 3 lines 40-60, where it is inherent that a Pseudo-noise generator will generate an unpredictable sequence of bits),
  - a transmitter that is configured to communicate the unpredictable sequence of bits (Fig.1 element 10, 20, 22, 24, 26, 28, and 30, column 3 line 35 – column 4 line 3, and column 5 line 48-68), and
  - a storage device that is configured to store data corresponding to the unpredictable sequence of bits (Fig.1 element 16 and column 3 lines 46-66), to facilitate a verification of receipt of the unpredictable sequence of bits by a receiving system (Fig.3 element 32 and 36, column 7 lines 3-12, and column 3 lines 32-44).
- With regard claim 2, Blasbalg further discloses that the transmitter includes a radio-frequency transmitter (Fig.1 elements 20-30 and column 5 lines 48-68).
- With regard claim 3, Blasbalg further discloses that the unpredictable sequence of bits is communicated via frequency modulation (Fig.1 elements 10, 20, 22, and 24, and column 5 lines 48-63).
- With regard claim 4, Blasbalg further discloses a receiving system comprising
  - a receiver that is configured to receive a modulation corresponding to a random bit sequence only (Fig.3 and column 6 line 28 – column 8 line 2),
  - a detector (Fig.3 elements 47 and 50) that is configured to detect the random bit sequence from the modulation (column 6 line 28 – column 7 line 31), and

a storage (Fig.3 elements 32 and 36) device that is configured to store data corresponding to the random bit sequence, to facilitate a verification of receipt of the random bit sequence (Fig.3 element 32 and 36, column 7 lines 3-12, and column 3 lines 32-44).

- With regard claim 5, Blasbalg further discloses that the receiver includes a radio-frequency receiver (Fig.3 and column 6 line 28 – column 8 line 2).
- With regard claim 6, Blasbalg further discloses the modulation includes a frequency modulation (Fig.1 elements 10, 20, 22, and 24, and column 5 lines 48-63).
- With regard claim 10, Blasbalg further discloses a carrier signal that is configured to contain a modulation corresponding to an unpredictable sequence of bits (Fig.1 element 10, 20, 22, 24, 26, 28, and 30, and column 5 lines 48-63).
- With regard claim 11, all limitation is contained in claims 10 and 3. The explanation of all the limitation is already addressed in the above paragraph.
- With regard claim 12, all limitation is contained in claims 10 and 4. The explanation of all the limitation is already addressed in the above paragraph.

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

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Patentability shall not be negated by the manner in which the invention was made.

10. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto (US 5,272,705) in view of Pitches et al. (US 4,237,537).

- With regard claim 14, Okamoto discloses a verification system (a transmit and receive semiconductor integrated circuit device to provide an echo back output by comparing or verifying the transmitted and received signal) comprising:  
a first register that is configured to contain received data (Fig.6 element 32),  
a second register that is configured to contain at least a portion of transmitted data (Fig.6 element 32),  
a comparator, operably coupled to the first register and the second register, that is configured to compare the received data to a select portion of the transmitted data (Fig.6 element 33).

Okamoto discloses all of the subject matter as described in the above paragraph except for specifically teaching a shift controller that is configured to shift the portion of transmitted data in the second register to provide a next select portion of the transmitted data for comparison, if the comparator indicates a difference between the received data and the select portion of the transmitted data.

However, Pitches et al. teaches that a shift controller (Fig.2 elements 44 and 45 and column 5 lines 1-28) that is configured to shift the portion of transmitted data in the second register to provide a next select portion of the transmitted data for comparison (Fig.2 elements 45 output to input of 41 and 46), if the comparator

indicates a difference between the received data and the select portion of the transmitted data (column 5 lines 1-28).

It is desirable to include a shift controller that is configured to shift the portion of transmitted data in the second register to provide a next select portion of the transmitted data for comparison, if the comparator indicates a difference between the received data and the select portion of the transmitted data in order to improve the disturbances (column 3 lines 32-43). Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention was made to include the apparatus/method as taught by Pitches et al. in which, including a shift controller that is configured to shift the portion of transmitted data in the second register to provide a next select portion of the transmitted data for comparison, if the comparator indicates a difference between the received data and the select portion of the transmitted data, into Okamoto's comparator output circuit with shift register and controller so as to improve the disturbance.

***Allowable Subject Matter***

11. Claims 17 and 18 are allowed.
12. Claims 7, 8, 15, and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
13. The following is an examiner's statement of reasons for allowance.
  - The prior art fails to teach a method of Claims 14 that specifically comprises the following:



-- The instant application is deemed to be directed to a non-obvious improvement over the invention patented in Pat. No. US 4231113, US 4,237,537 and US 5,272,705. The improvement comprises that subsequently comparing the reception data to the transmission data to identify a period of correspondence between the reception data and the transmission data, and determining the reward based on the period of correspondence.

### ***Conclusion***

14. Reference(s) US 5,144,313 are cited because they are put pertinent to the transceiver with PN bit sequence generator. However, none of references teach detailed connection as recited in claim.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M. Wang whose telephone number is 571-272-3053. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ted M Wang  
Examiner  
Art Unit 2634

Ted M. Wang

A handwritten signature in black ink, appearing to read 'Shuwang Liu', written in a cursive style.

**SHUWANG LIU**  
**PRIMARY EXAMINER**